



# Model New Home Construction Green Building Guidelines Staff Report

---

## MEMO

May 2, 2006

TO: City Council

FROM: [NAME, POSITION]

SUBJECT: *Residential Green Building Guidelines – Reference Document*

### BACKGROUND:

Residential construction continues to result in significant impacts on energy consumption, greenhouse gas emissions, waste generation, water use, transportation, and other quality of life factors.

- Construction investment in California for new residential is \$34 billion in 2003, compared to \$14 billion for private commercial.
- In order to meet expected California population growth, approximately 3.3 million homes need to be added by 2020.
- Residential sector uses 31% of electricity consumed in the state.
- A 2,000 square foot home: requires 15,000 board feet lumber and generates 3 to 5 tons waste.
- Residences use 5.6 million acre-feet of applied water annually.
- Americans spend on average 90% of their time indoors. Many common building products used in housing construction emit chemicals known to have adverse health impacts.
- Green building can reduce the environmental and quality of life impacts of new development.

An effective way to reduce these impacts is by incorporating green building measures in projects.

### What is Green Building?

Green building is one of the fastest growing trends in the building industry. Interest in green building spans the public, private and nonprofit sectors. Green building promotes a whole-systems approach to the planning, design, construction and operation of buildings. This comprehensive approach benefits communities, residents and businesses by:

- Improving construction quality and increasing building longevity
- Reducing utility, maintenance and infrastructure costs

- Protecting the health of workers and residents
- Enhancing quality of life in our communities
- Supporting manufacturers and suppliers of resource-efficient building products

Green building means taking steps to create buildings that are safe and healthy for people and that protect our environment. For example, proper orientation of homes on a site can significantly reduce the heating and cooling energy that is required year after year. Recycled-content decking, reclaimed lumber and other products put waste to good use, while providing quality and durability that often exceed conventional materials. Advanced framing techniques can substantially reduce lumber requirements without compromising structural integrity. Using low-emitting interior finishes and designing for sufficient ventilation will contribute to better indoor air quality. While specific methods and products may vary from project to project, the basic principles of green building apply to all types of new construction and renovation, from remodeling a kitchen to constructing a courthouse.

## **Residential Green Building Guideline Development**

In recent years, there has been increasing interest among local governments in collaborating to develop greater regional consistency among local green building initiatives. This interest has been facilitated by the emergence of Build It Green, a professional non-profit membership organization dedicated to promoting healthy, energy-efficiency, and resource-efficient buildings in California. Build It Green serves as an umbrella and facilitator for associate councils, guilds, and networks including the Public Agency Council, Green Remodelers Guild, Non-Profit Network, Green Affordable Housing Coalition, Real Estate Council, Suppliers Council, and Builders Council. The Public Agency Council (PAC) is a unique collaborative effort of over 70 participating public agencies that meet quarterly to create consistent green building standards, share information, and support each others' programs and initiatives.

City Staff regularly participates in the Build It Green Public Agency Council, which was instrumental in developing the 2005 edition of the *Build It Green New Home Construction Green Building Guidelines*. These guidelines are based on the Alameda County New Home Construction Green Building Guidelines, which were first developed in 2000 through a collaborative process and public-private partnership among builders, green building experts, and local government staff in Alameda County. Representatives from major production builders, including Centex Homes, Greenbriar Homes, Ponderosa Homes, Pulte Homes, Shea Homes, Signature Properties, Silverwood Homes, and Toll Brothers, provided input and direction in the development of the original Guidelines.

The Guidelines were updated in 2005 to expand their applicability throughout California, address changes in Title 24, and incorporate measures from other residential green building initiatives, such as the California Green Builder program, National Association of Home Builders guidelines, and the pilot draft LEED for Homes checklist.

The Green Residential Environmental Action Team (GREAT), a task force of state agencies including the California Integrated Waste Management Board, California Energy Commission, Office of Environmental Health Hazard Assessment, Office of the State Architect, Department of General Services, Department of Water Resources, and California Air Resources Board, provided technical expertise and input in the update of these Guidelines.

Build It Green expanded and facilitated the stakeholder process to include input from its various councils, including the Public Agency Council, Builders Council, Non-Profit Network, and Suppliers Council.

Publicly available information, scientific data, and third-party standards were referenced in the development of these Guidelines. The Guidelines are intended to be a living document, and will be regularly updated as additional technical and quantitative information becomes available, measurement tools such as Life Cycle Assessment become more accessible, and new green measures are developed.

## **DISCUSSION:**

### **Voluntary Guidelines vs. Green Building Programs**

Due to the increasing level of interest in green building, a number of local governments, state agencies, utilities, non profit groups, and professional associations have developed a variety of green building initiatives, guidelines, and programs.

To clarify and simplify the decision making process, it is important to make the distinction between green building *guidelines* and *programs*. Guidelines are a set of *voluntary* measures and practices for sustainable home construction. Guidelines are developed to:

- Provide local governments with a ready-to-use educational tool for city staff, builders and homeowners
- Provide a policy foundation for local governments interested in implementing a green building program
- Offer a range of green practices for builders to choose from, ranging from simple “mainstream” steps to more sophisticated measures
- Encourage regional consistency to increase predictability for builders

The Build It Green Guidelines include the Green Points checklist, a tool to assess how green a project is. The guidelines will be updated periodically using a broad stakeholder’s process.

Green building *programs* have specific implementation requirements that may include third party verification. Examples include: CBIA/BII Green Builder Program, LEED-Homes (currently undergoing pilot phase), Energy Star Homes, Healthy Homes, etc. The *New Home Construction Green Building Guidelines* are

consistent with and can be used in conjunction with any of the above mentioned programs.

### **Guidelines as a Reference Guide**

The proposed resolution will adopt the Guidelines as a Reference Guide, which is a voluntary reference document only. The attached resolution would not mandate any particular action by private builders, developers, or others, and does not impose any new building standards or requirements. Increasingly, building professionals, homeowners, and businesses are voluntarily seeking to implement green building practices. Having an official city reference guide that sets forth feasible and proven green building measures would provide a useful source of information for such individuals and businesses. It would also indicate the city's commitment and desire to encourage green building within its jurisdiction.

### **League of California Cities Resolution**

The East Bay Division of the League of California Cities sponsored a *Voluntary Statewide Residential Green Building Guidelines Resolution* for adoption by the General Resolutions Committee at the League's Annual Conference in October, 2005. The adopted resolution:

- Supports the voluntary inclusion of green building design and strategies in public and private development projects
- Encourages leadership from the appropriate state agencies, such as the California Integrated Waste Management Board, the California Energy Commission and the Department of Housing and Community Development, to take a leadership role in providing voluntary , model statewide residential guidelines
- Encourages cities to adopt voluntary residential green building guidelines as a reference guide, to evaluate available green building programs and adopt those best suited for their communities, and to explore incentives to encourage green building by private developers of residential construction projects.

### **RECOMMENDATION**

Staff recommends adoption of Resolution #, thereby adopting the Build It Green New Home Construction Green Building Guidelines, as they may be amended from time to time, as a City reference document and directing staff to explore incentives to encourage use of the Guidelines by private developers of residential construction projects within the City.

### **ATTACHMENTS**

- A. Resolution # Adopting New Home Construction Green Building Guidelines as City Reference Document

- B. League of California Cities Resolution Relating to Voluntary Statewide Residential Green Building Guidelines
- C. Build It Green New Home Construction Green Building Guidelines, 2005 Edition